

EXTENDED BOUNDARIES OF THE ANT MIMICKING SAC SPIDER GENUS *Aetius* O. PICKARD-CAMBRIDGE, 1897 (ARANEAE: CORINNIDAE)

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ABSTRACT

Aetius decollatus O. Pickard-Cambridge, 1897 is discovered and redescribed from new locality in Tamil Nadu, India. A new combination is being proposed: *Aetius tuberculatus* (Haddad, 2013) comb. nov., thus extending the distribution of genus *Aetius* to the African continent.

INTRODUCTION

The genus *Aetius* O. Pickard-Cambridge, 1897 is known from two species: *A. decollatus* O. Pickard-Cambridge, 1897 is endemic to the Indian subcontinent and known from India and Sri Lanka only, while *A. nocturnus* Deeleman-Reinhold, 2001 is known from Thailand and Borneo (World Spider Catalog, 2016). Although, Reimoser (1934) reported a male of *A. decollatus* from Mudumalai, Tamil Nadu, India, he provided neither illustrations nor description (Majumder & Tikader, 1991; Deeleman-Reinhold, 2001). Dankittipakul & Singtripop (2013) re-examined the specimen studied by Reimoser and found it to be a penultimate male with swollen but undifferentiated pedipalps. Sudhin *et al.* (2016) described the male of the species and redescribed the female from freshly collected material from Kerala and Tamil Nadu.

Aetius decollatus was initially placed in the Myrmeciidae C. L. Koch, 1851 (O. Pickard-Cambridge, 1897), a family that was erected mainly to accommodate ant-mimicking Micariinae genera (Reiskind & Levi, 1967). It was later considered a member of the Clubionidae Wagner, 1887 (Majumder & Tikader, 1991), but is today included in the family Corinnidae: Castianeirinae (Deeleman-Reinhold, 2001).

In this paper, we describe both sexes of *A. decollatus* in detail, based on specimens collected from new location in Tamil Nadu. The specimens were collected at the Madras Christian College campus (MCC), which encloses a scrub jungle located on the outskirts of Chennai city, Tamil Nadu (India). With the transfer of *Apochinomma tuberculata* Haddad, 2013 to *Aetius*, the distribution of this genus extends into the African continent.

MATERIALS AND METHODS

Live specimens were photographed with a Nikon D60 digital SLR camera (18-55mm lens reversed for macrophotography). They were subsequently preserved in 70% alcohol and examined under a Leica S8APO stereoscopic microscope. Photographs at different focal planes were obtained using a Leica MC120 HD camera and stacked with the Leica Application Suite (LAS) software. Male pedipalps were detached for examination and female genitalia were excised using sharpened needles. The epigyne was cleared in 10% KOH solution. All specimens studied were deposited in the National Zoological Collection, Zoological Survey of India, Southern Regional Centre, Chennai (ZSI-SRC).

Abbreviations: ALE—anterior lateral eye, AME—anterior median eye, MOA—median ocular area, PLE—posterior lateral eye, PME—posterior median eye, RTA—retrolateral tibial apophysis. All measurements are in millimeters.

TAXONOMY

Corinnidae Karsch, 1880

Aetius O. Pickard-Cambridge, 1897

Diagnosis: *Aetius* O. Pickard-Cambridge, 1897 can be differentiated from other genera by wider and strongly recurved posterior eye row; posterior end of the carapace protrudes overhanging the pedicel. Abdomen elongate with an intermediate transverse constriction; posterior region bears tufts of white hairs; epigyne strongly sclerotized; spermathecae large; male palp with deep semicircular cymbial notch retrolaterally (Deeleman-Reinhold, 2001; Dankittipakul & Singtripop, 2013)

Aetius decollatus O. Pickard-Cambridge, 1897

(Figures 1–20)

Aetius decollatus O. Pickard-Cambridge, 1897: 1077, pl. 52, fig. 1; Reimoser, 1934: 491; Majumder & Tikader, 1991: 161, figs. 338–342; Deeleman-Reinhold, 2001: 336, figs. 496–501; Sudhin *et al.*, 2016: 490, figs. 1–8.

Type material: ♀ Holotype, Sri Lanka (exact locality unknown), deposited at Oxford University Museum (HCO 13326) (not examined).

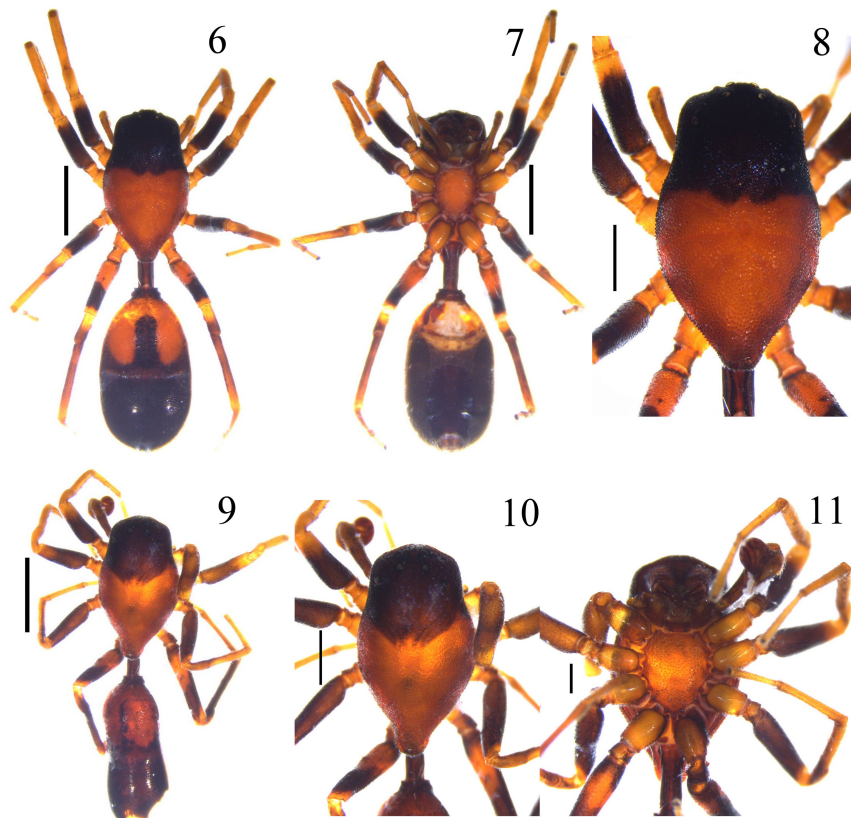
Specimen examined: ♂ (ZSI-SRC I/SP 21), Madras Christian College, Tambaram, Chennai, India, 11.x.2012 (12° 54' 49.6146" N, 80° 7' 30.9468" E, 32m) and 1♀ (ZSI-SRC I/SP 22), 18.iii.2013 (12° 55' 13.4106" N, 80° 7' 24.7512" E, 32 m) leg. John Caleb T.D.

Diagnosis: *Aetius decollatus* can be distinguished from *A. nocturnus* by the dark cephalic and reddish thoracic regions (uniformly dark brown in *A. nocturnus*), dark abdomen with inverted U-shaped, reddish patch anteriorly (Figures 1–4, 6, 9) (absent in *A. nocturnus*), the slender abdomen with narrower constriction centrally than *A. nocturnus*; male pedipalp with round bulbus (Figures 14, 15, 17) and elongate, thick RTA (Figures 16, 18, 20) (triangular RTA in *A. nocturnus*); partially swollen palpal patella and slightly shorter palpal tibia than in *A. nocturnus*; epigyne convex, elevated with postero-lateral copulatory openings; short copulatory ducts and large spermathecae (Figures 12, 13) (epigyne almost same in *A. nocturnus* but posterior region of spermathecae more rounded).

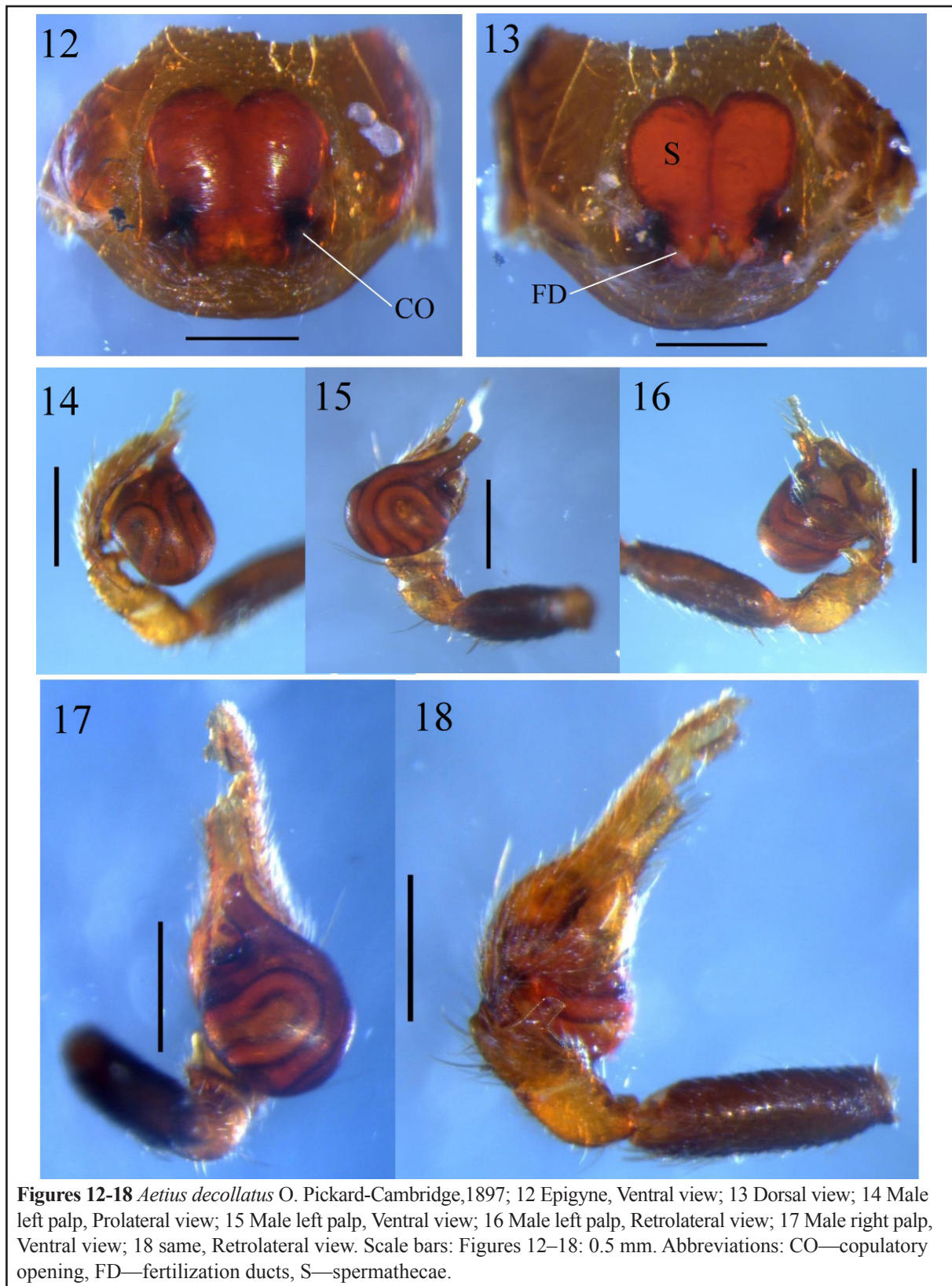
Male: Carapace: 3.22 long, 1.87 wide; abdomen 3.45 long, 1.41 wide; total length with pedicel 7.12. Carapace blackish with reddish thoracic region, highly rugulose, covered with pale setae; posterior end of thoracic region protrudes partially over the pedicel (Figures 4, 9–10); chelicerae vertical, reddish brown; sternum reddish, with posterior margin protruding between coxae IV (Figure 11). Anterior eye row slightly procurved, posterior eye row strongly recurved, wider than anterior row (Figure 5); eye measurements: AME 0.15, ALE 0.14, PME 0.11, PLE 0.13, AME–AME 0.15; AME–ALE 0.04; PME–PME 0.31; PME–PLE 0.35; ALE–PLE 0.46; MOA 0.36 long, anterior width 0.40, posterior width 0.52, clypeus height 0.31; pedicel length (in ventral view) 1.26.

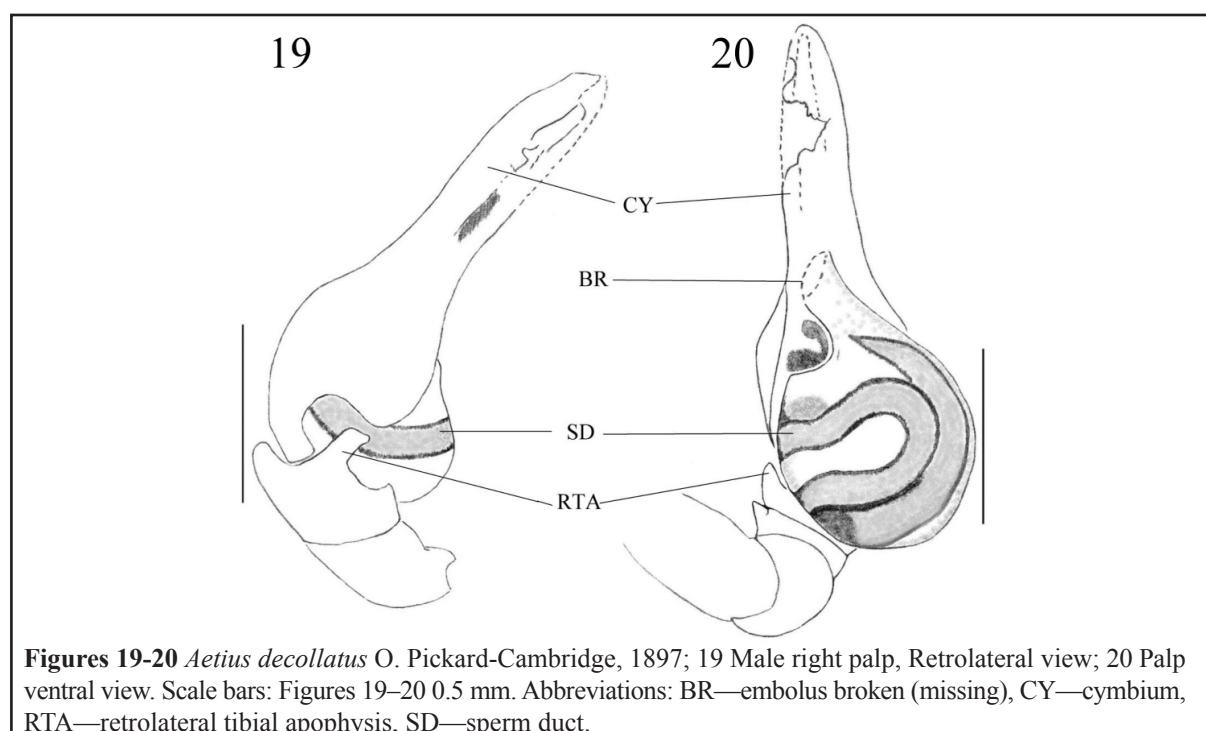


Figures 1-5 *Aetius decollatus* O. Pickard-Cambridge, 1897
 1 Female Habitus; 2 & 3 Lateral view; 4 Male, Dorsal view; 5 Male, Front view.



Figures 6-11 *Aetius decollatus* O. Pickard-Cambridge, 1897 6 Female, Dorsal view; 7 Ventral view; 8 Carapace; 9 Male, Dorsal view; 10 Carapace; 11 Ventral view showing sternum. Scale bars: Figures 6-7, 9: 2 mm; Figures 8, 10: 1 mm; Figure 11: 0.5 mm.





Legs yellowish, covered with short white setae; all femora black except femur IV with a yellowish proximal half; leg IV with dark patellar and tibial regions (Figures 4, 9, 11); leg measurements: I 5.57 (1.57, 0.64, 1.22, 1.18, 0.96); II 6.88 (1.65, 0.70, 1.42, 1.28, 0.90); III 5.12 (1.59, 0.44, 1.30, 1.07, 0.72); IV 6.53 (1.86, 0.72, 1.62, 1.55, 0.78). Abdomen blackish with a broad, inverted U-shaped, reddish patch anteriorly; abdomen elongate with slight transverse constriction near the middle (Figures 4, 9). Palp femur black, slightly longer than palpal patella + tibia but slightly shorter than cymbium; tibia, patella and tarsus reddish-yellow; cymbium with an excavated notch near RTA; rounded bulbus with highly convoluted sperm duct (Figures 14–17, 20); RTA thick and elongated (Figures 16, 18–19).

Female: Described in detail by Deeleman-Reinhold (2001) and Sudhin *et al.* (2016). The female resembles the male in body coloration with similar markings and leg stripes (Figures 1–3, 6–7). Dimensions of the specimen examined are as follows: carapace 3.72 long, 2.12 wide; abdomen 4.19 long, 2.31 wide; total length with pedicel 8.69. Eye measurements: AME 0.15, ALE 0.12, PME 0.12, PLE 0.12, AME–AME 0.18; AME–ALE 0.07; PME–PME 0.35; PME–PLE 0.44; ALE–PLE 0.58; MOA 0.45 long, anterior width 0.44, posterior width 0.58, clypeus height 0.34; pedicel length (in ventral view) 1.45. Leg measurements: I 5.78 (1.70, 0.56, 1.42, 1.19, 0.91); II 6.15 (1.90, 0.48, 1.52, 1.29, 0.96); III 5.39 (1.42, 0.59, 1.38, 1.22, 0.78); IV 7.54 (2.14, 0.75, 1.91, 1.67, 1.07). Epigyne set on a highly sclerotized convex plate; copulatory openings placed at postero-lateral region; spermathecae large (Figures 12, 13).

Distribution: India [Kerala: Wayanad (Sudhin *et al.*, 2016), Tamil Nadu: Mudumalai (Reimoser, 1934), Pollachi (Sudhin *et al.*, 2016), Tambaram, present record] and Sri Lanka (O. Pickard-Cambridge, 1897).

Remarks: MCC has a large campus spread over 365 acres and encompasses semi-conserved regions of scrub jungle remnants of tropical dry evergreen forest. The male was found dead as prey of ants and was therefore slightly damaged. The posterior end of the abdomen was partially eaten and the cymbium and embolus of the pedipalps were broken, possibly caused by the desiccation of the specimen. The female was collected alive on the bark of a tree trunk.

***Aetius tuberculatus* (Haddad, 2013) comb. nov.**

Apochinomma tuberculata Haddad, 2013c: 2516, figs. 2F, 13C-D.

Remarks: The species is known from a single female specimen from Ivory Coast, Africa. The species is proposed to be transferred to *Aetius* by the presence of the following characters: carapace with posterior blunt projection overhanging the pedicel (see figs 2F in Haddad, 2013); epigyne with rounded copulatory openings placed posteriorly; short copulatory ducts and large spermathecae (see figs. 13C-D in Haddad, 2013). With the combination of the above mentioned characters it is now transferred to genus *Aetius*.

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